

REMARKS

The present application has been reviewed in light of the Office Action dated May 7, 2009. Applicants respectfully request that the Examiner reconsider and withdrawn the outstanding rejections in view of the foregoing amendments and the following remarks.

Status of the Claims

Claims 1-10, 12-27, 29-36, 39, 40, and 43-50 are presented for examination, of which Claims 1, 12, 23, and 29 are in independent form. Claims 1-4, 8-10, 12-21, 23-26, 29-36, and 45-50 have been amended. Applicants respectfully submit that the changes to independent Claims 1 and 23 are supported at least by Figures 1-5 and the accompanying description, for example at page 18, and the changes to independent Claims 12 and 29 are supported at least by Figures 11-13 and the accompanying description, for example, at pages 36 and 37, and therefore no new matter has been added.

Claim Rejection

The Office Action rejects Claims 1-10, 12-27, 29-36, 39, 40, and 43-50 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0018818 (*Boliek et al.*) in view of what was alleged to have been well known in the art. In response, while not conceding the propriety of the rejection, independent Claims 1, 12, 23, and 29 have been amended. Applicants submit that as amended, these claims are allowable for the following reasons.

A. Independent Claims 1 and 23

Independent Claim 1 relates to a method of processing a request from a first communication apparatus connected through a communication network to a remote second communication apparatus, the method being implemented in the second apparatus. The method comprises receiving and processing steps. The receiving step receives the request, which is for obtaining digital data of a compressed digital signal that comprises header data and a signal body comprising data packets. The processing step processes the request and includes the step of determining a position, in the body of the compressed digital signal, of at least one data packet corresponding to the request as a function of the length of the header data and of at least one pointer marker present in the header data of the compressed digital signal.

Claim 1 has been amended to recite the step of determining whether or not at least one pointer marker, providing information for calculating the length of the part of the signal body preceding at least one data packet corresponding to the request, is present in the header data.

Claim 1 has also been amended to recite the step of forming the at least one pointer marker in the compressed digital signal when the determining step determines that the at least one pointer marker providing information for calculating the length of the part of the signal body, is not present in the header data; and

By this arrangement, when the point marker is not present in the header, the pointer marker can be formed in the signal on the server side prior to processing the request, e.g., in the remote second communication apparatus, which receives a request from a first

communication apparatus for obtaining digital data of a compressed digital signal, as discussed for example, at page 18, lines 4-15, and shown in FIG. 3.

In contrast, neither the citation to *Boliek et al.*, nor common knowledge in the art, is not understood to disclose or suggest that when the point marker is not present in the header, the pointer marker can be formed in the signal on the server side prior to processing the request.

Therefore, neither this citation, nor common knowledge in the art is understood to disclose or suggest, prior to processing in a second communication apparatus a request from a first communication apparatus for obtaining digital data of a compressed digital signal that comprises header data and a signal body comprising data packets, the steps of (a) determining whether or not at least one pointer marker, providing information for calculating the length of the part of the signal body preceding at least one data packet corresponding to the request, is present in the header data, and (b) forming the at least one pointer marker in the compressed digital signal when the determining step determines that the at least one pointer marker providing information for calculating the length of the part of the signal body, is not present in the header data, as recited by amended Claim 1.

Therefore, neither this citation, nor common knowledge in the art is understood to disclose or suggest thereafter, the step of processing the request, including the step of determining a position, in the body of the compressed digital signal, of the at least one data packet corresponding to the request as a function of the length of the header data and of the at least one pointer marker present in the header data of the compressed digital signal, as also recited by amended Claim 1.

Rather, the citation to *Boliek et al.* is understood to merely relate to client/server systems that provide for imaging of JPEG 2000 codestreams (paragraph 1). More specifically, this citation is understood to merely discuss 1) that a main header is provided at the beginning of a codestream, and that the main header contains markers that describe image characteristics, a coding style, and other parameters that apply to the whole image or individual components thereof (paragraph 33), 2) that each of a plurality of tile-parts has a header, wherein the tile-parts are indexed to indicate order, that a first tile-part header of a tile contains information that applies to the whole tile or individual tile-components thereof, and that remaining tile-part headers include only order and length information for that tile-part and/or succeeding tile-parts (paragraph 33), and 3) that a client provides requests to a server to obtain some amount of data corresponding to an image, wherein the data being requested is part of a codestream stored as a file at the server, and that the server receives the request for bytes of a particular file and transmits them to the client (paragraph 39).

Since amended Claim 1 is understood to recite at least one feature not disclosed or suggested by the applied art, Applicants respectfully submit that the Office has not yet satisfied its burden of proof to establish a prima facie case of obviousness against amended Claim 1. Therefore, Applicants respectfully request that the rejection of amended Claim 1 be withdrawn. And because corresponding apparatus Claim 23 has been amended in a similar manner, it is allowable for similar reasons. Therefore, Applicants respectfully request that the rejection of amended Claim 23 be withdrawn.

If the Examiner continues to reject Claim 1 for the same reasons, Applicants respectfully request that he cite a specific piece of prior art teaching whatever knowledge

the Examiner is combining with the *Boliek et al.* citation to render the invention of amended Claim 1 obvious. Because as is best understood, the *Boliek et al.* citation is silent regarding codestream headers that do not include certain markers, much less, that, when a marker providing information for calculating a length of a part of a signal body is not present, forming the marker in the signal prior to processing a request on the second communication-apparatus side. And Applicants are not aware of any piece of common knowledge that would render Claim 1 obvious when combined with the *Boliek et al.* citation. Accordingly, in accordance with MPEP § 2144.03, Applicants respectfully request that the Examiner cite a piece of prior art disclosing such knowledge or withdraw the rejection.

B. Independent Claims 12 and 29

Independent Claim 12 relates to a method of processing compressed digital data received by a first communication apparatus connected through a communication network to a remote second communication apparatus, the method being implemented in the first communication apparatus. The method comprises receiving, determining, and inserting steps. The receiving step receives only a portion of a compressed digital signal present in the second apparatus and comprising a body that comprises data packets, the received portion of the compressed digital signal comprising at least one data packet. The determining step determines a position at which the at least one data packet of the received portion of the compressed digital signal is to be inserted into the body of a derived compressed digital signal created by the first communication apparatus. The position is determined as a function of the length of header data of the derived compressed digital

signal and of at least one pointer marker previously received and inserted into the header data of the derived compressed digital signal by the first apparatus. The at least one pointer marker provides information for calculating the length of the part of the body of the derived compressed digital signal preceding the at least one data packet of the received portion of the compressed digital signal. The inserting step inserts into the body of the derived compressed digital signal the at least one data packet of the received portion of the compressed digital signal at the determined position.

Claim 12 has been amended to recite the step of creating a derived compressed digital signal derived from the compressed digital signal present in the second apparatus in the form of a cache file, the derived compressed digital signal comprising header data and a body and being capable of containing all or part of the body of the compressed digital signal present in the second apparatus.

Claim 12 has also been amended to recite the step of filing the body of the derived compressed signal in the cache file with arbitrary data, so as to constitute a space of the same size as the body of the compressed digital signal present in the second apparatus.

By this arrangement, a previously-created cache file, created in a first communication apparatus can be filled with arbitrary or dummy data, so as to prepare in advance, a file containing pre-allocated space for accommodating data to be received during a subsequent step, data such as at least one data packet of a portion of a compressed digital signal present in the second apparatus and received by the first apparatus.

In contrast, the *Boliek et al.* citation is not understood to disclose or suggest that a previously-created cache file, created in a first communication apparatus, can be filled with arbitrary or dummy data, so as to prepare in advance, a file containing pre-allocated

space for accommodating data to be received during a subsequent step, data such as at least one data packet of a portion of a compressed digital signal present in the second apparatus and received by the first apparatus.

Therefore, the *Boliek et al.* citation is not understood to disclose or suggest a) a step of creating a derived compressed digital signal derived from a compressed digital signal present in a second remote communication apparatus in the form of a cache file, the derived compressed digital signal comprising header data and a body and being capable of containing all or part of the body of the compressed digital signal present in the second apparatus, and b) the step of filing the body of the derived compressed signal in the cache file with arbitrary data, so as to constitute a space of the same size as the body of the compressed digital signal present in the second remote communication apparatus, as recited by amended Claim 12. As a result, this citation is also not understood to disclose or suggest c) a determining step that determines a position at which the at least one data packet of the received portion of the compressed digital signal is to be inserted into the body of the derived compressed digital signal created by the first communication apparatus, the position determined as a function of the length of header data of the derived compressed digital signal and of the at least one pointer marker previously received and inserted into the header data of the derived compressed digital signal by the first apparatus, the at least one pointer marker providing information for calculating the length of the part of the body of the derived compressed digital signal preceding the at least one data packet of the received portion of the compressed digital signal, and d) an inserting step that inserts into the body of the derived compressed digital signal the at least one data packet of the

received portion of the compressed digital signal at the determined position, as also recited by amended Claim 12.

As noted above, the citation to *Boliek et al.* is not understood to disclose the creation of the claimed cache file for storing therein a derived compressed digital signal. In fact, the *Boliek et al.* citation mentions in paragraph 45 merely that "Processing logic integrates the received data, which is sent in encoding format, with the previously buffered data to create a correct JPEG 2000 codestream (processing block 305)". Paragraph 31 of the Office Action interprets this paragraph as meaning that "received data is written into the memory of the client device, replacing any arbitrary data that was there previously". However, Applicants submit that this interpretation is at odds with the express teaching of the *Boliek et al.* citation. For example, paragraph [0042] of this citation states:

Next, processing logic selects the data of the JPEG 2000 codestream that corresponds to these image characteristics (processing block **302**), and determines what byte requests are necessary to receive this data based on what is already buffered at the client (processing block **303**). The client determines which packets it needs and which packets it already has in order to generate a request for the packets it still needs. The client initially begins with no packets and then as more requests are made, and as described in further detail below, the client retains packets of the codestream and stores them in a manner that provides the client easy access to the previously requested and obtained packets.

In view of this teaching, Applicants submit that paragraph [0045] cannot be interpreted as meaning that received data is written into the memory of the client device, replacing any arbitrary data that was there previously. This can be seen as follows. As explained above in paragraph [0042], the memory of the client device stores packets that the client does not need ("what is already buffered at the client"; "which packets it already

has") and requests the packets it still needs. The stored packets are therefore not arbitrary data. Under these circumstances, when the client device next receives the needed packets, it is understood to integrate them in the memory together with the already buffered packets in order to create a correct JPEG 20000 codestream. Thus, the received needed packets are not understood to replace the previously buffered data as asserted in the Office Action, but are understood to be combined therewith to create the codestream. Therefore, there is not understood to be any teaching based on paragraph [0045] of a step of filing the body of a derived compressed signal in a cache file with arbitrary data, so as to constitute a space of the same size of the body of the compressed digital signal present in a second apparatus. In contrast, in the claimed invention, the body of the derived compressed signal in the cache file is filled with arbitrary data, so as to prepare in advance a file containing pre-allocated space for subsequently receiving data therein.

Since amended Claim 12 is understood to recite at least one feature not disclosed or suggested by the applied art, Applicants respectfully submit that the Office has not yet satisfied its burden of proof to establish a prima facie case of obviousness against amended Claim 12. Therefore, Applicants respectfully request that the rejection of amended Claim 12 be withdrawn. And because corresponding apparatus Claim 29 has been amended in a similar manner, it is allowable for similar reasons. Therefore, Applicants respectfully request that the rejection of amended Claim 29 be withdrawn.

C. Dependent Claims

The other rejected claims in this application depend from one or another of the independent claims discussed above and, therefore, are submitted to be patentable for at

least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, individual consideration or reconsideration, as the case may be, of the patentability of each claim on its own merits is respectfully requested.

Conclusion

Applicants submit that this Amendment After Final Rejection clearly places the subject application in condition for allowance. This Amendment was not presented earlier, because Applicants believed that the prior Amendment placed the subject application in condition for allowance. Accordingly, entry of the instant Amendment, as an earnest attempt to advance prosecution and reduce the number of issues, is requested under 37 C.F.R. § 1.116.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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